BRYM, J.

[redacted]

Decision of the party and of the government on medicinal plants. Cesk. farm. 2 no.2:33-37 Feb 1953. (CIML 24:4)

Aus dem Forschungsinstitut fur Heilpflanzen in Prag.

"Uber Schwankungen im Gehalt an atherischem Ol und Citral bei Nepeta Cataria L. var. Citridora Balbis, Dracocephalum moldavica L. und Perilla ocymoides L. im Laufe der Vegetation," by Von J. HOLUBEK und J. BRYM, both of Prag. Institut fur Heilpflanzenforschung. Submitted on 27 Apr 1956.

SOURCE: Die Pharmazie, Sept. 1956, Unclassified.

2

[illegible] in volatile oil and citral [illegible] in Ne[illegible] cataria var. citriodora, [illegible] and Perilla frutescens in the course of vegetation [illegible] [illegible] (Research Inst. Med. [illegible] [illegible] II, 595-604(1956).—The max. content of volatile [illegible] and citral occurs in *N. cataria* at the time of flower-bud formation and in *P. frutescens* at the beginning of flowering. In *D. moldavica*, max. oil content occurs at the beginning of fruiting, while max. citral content is seen at beginning of fruit ripening. Yields of fresh plant material and of seed are also reported for the 3 species. G. M. Hocking

BRYM, L.

Copying equipment for lathes. p. 485. STROJIRENSKA VYROBA. (Ministerstvo strojirenstvi) Praha. Vol. 3, no. 12, Dec. 1955.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

BRYM, L.

BRYM, L. The SP 31 semiautomatic duplicating lathe with preselected controls. p. 209.

Vol. 4, No. 5, May 1956.
STROJIRENSKA VYROBA.
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 3, March 1957

BRYM, L. ; TLUSTY, J.

"Machine tools from the German Democratic Republic at the Leipzig Spring Fair, 1959." p. 266.

STROJIRENSKA VYROBA. (MINISTERSTVO TEZKEHO STROJIRENSTVI, MINISTERSTVO PRESNEHO STROJIRENSTVI A MINISTERSTVO AUTOMOBILOVEHO PRUMYSLU A ZEMEDELSKYCH STROJU.) Praha, Czechoslovakia, Vol. 7, no. 6, June 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September 1959. Uncl.

Brynda, J.

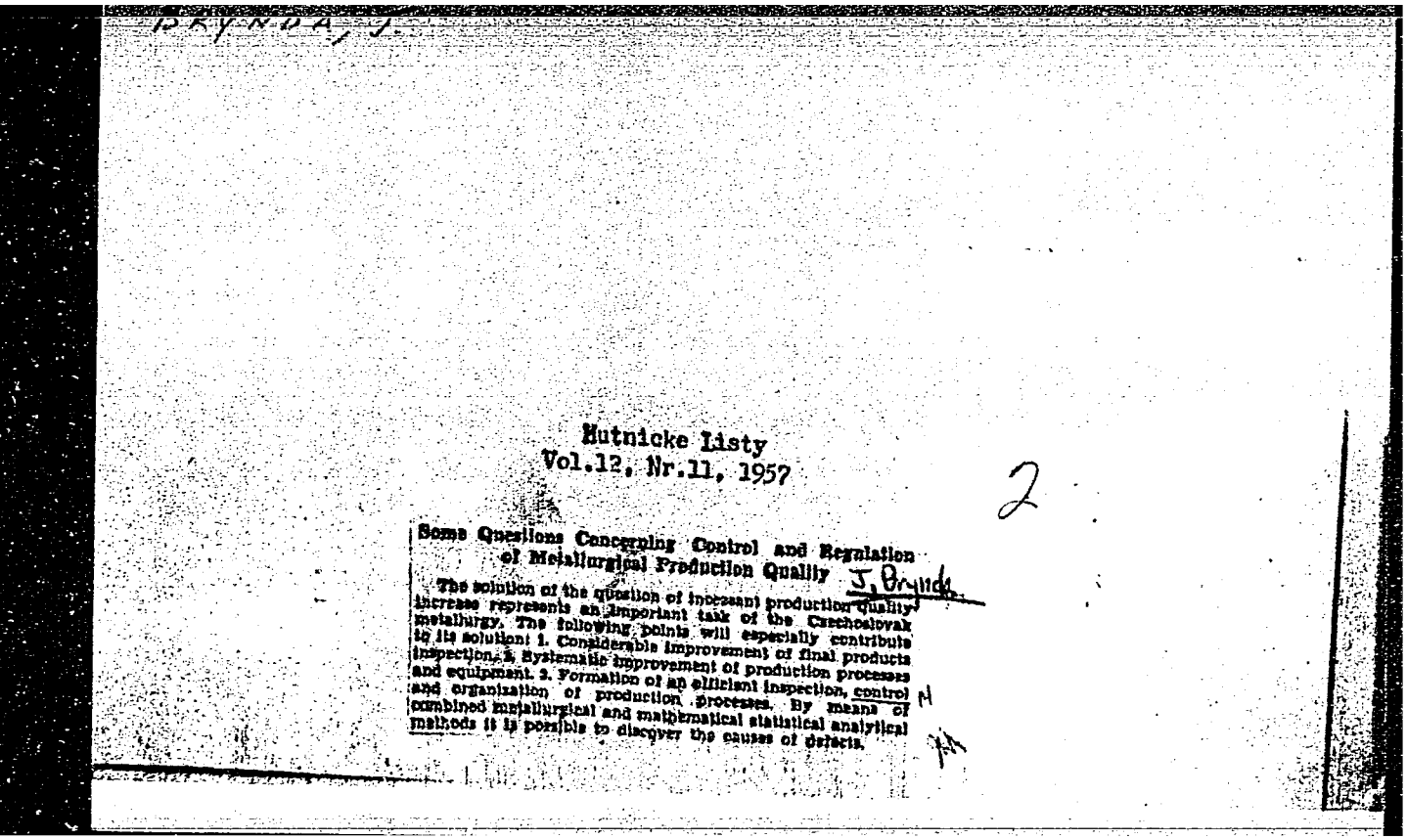
Improving quality and reducing the number of defective products in production. p. 225. HUTNIK. (Ministerstvo hutniho prumyslu a rudnych dolu) Praha. Vol. 4, no. 8, Aug. 1954.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

BRYNDA, J.

Modernization of technical control in metallurgic production. p. 197.
(HUTNIK, Vol. 7, No. 6, June 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.



Hutnicke Listy
Vol.12, Nr.11, 1957

2

Some Questions Concerning Control and Regulation of Metallurgical Production Quality J. Brynda

The solution of the question of incessant production quality increase represents an important task of the Czechoslovak metallurgy. The following points will especially contribute to its solution: 1. Considerable improvement of final products inspection. 2. Systematic improvement of production processes and equipment. 3. Formation of an efficient inspection, control and organization of production processes. By means of combined metallurgical and mathematical statistical analytical methods it is possible to discover the causes of defects.

BRYNDA, Jaroslav, inz.

Trends in the comples mechanization and automation of industrial production in Czechoslovakia in the years 1964-1970. Automatizace 6 no.5:109-110 My '63.

1. Statni komise pro rozvoj a koordinaci vedy a techniky.

BRYNDA, Jaroslav, ins.

Creation of conditions for faster development of a complex mechanization and automation. Automatizace 5 no.11:294-296 N '62.

1. Statni komise pro rozvoj a koordinaci vedy a techniky, Praha.

BRYNDA, Jaroslav, inz.

Progress in the automation of industrial production control by means of automatic digital computers. Tech praca 16 no.3: 182-183 Mr '64.

BRYNDA, Jaroslav, inz.

Automatic computers in Czechoslovakia. Automatizace 7 no.11: 281-283 N '64.

1. State Commission for the Development and Coordination of Science and Technology, Prague.

BRYNDA V., BRECKA A., CIZKOVA H., FRAGOVA H., FRAGNER I., NEMEC L., NOUBIK J., RACHOVA M. and TOMASKOVA A. Pracovano v Laboratorich Ustavu Lekarske Mikrobiologie a Immunologie Karlovy University, Praha. Nase skusenosti s americkymi kmeny penicillii pro vyrobu penicillinu, American strains of Penicillium moulds in the production of penicillin in Czechoslovakia, Lekarske Listy, Brno 1949, 4/12 (274-276) Graphs 1

Several Penicillium strains obtained from the United States were compared with home strains. The variability of both groups was the same. An evaluation of strains suitable for the manufacture of penicillin is given.

Raskova - Prague (II, 4)

So: Medical Microbiology and Hygiene, Section IV, Vol 3, No. 1-6

BRYNDAC, J.; DVORAK, J.

Hydrocyanic acid in foodstuffs and some observations of its laboratory detection. p. 464.

CESKOSLOVENSKA HYGIENA. Praha, Czechoslovakia. Vol. 4, no. 8, Sept. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, January 1960.

Uncl.

NADZHAR'YAN, Zh.R.; BRYNDIN, V.G.

Fluidized bed roasting of nickel concentrates obtained in the flotation of matte. TSvet. met. 34 no.3:53-55 Mr '61. (MIRA 14:3)

(Nickel—Metallurgy) (Fluidization)

S/032/62/028/002/034/037
B124/B101

AUTHORS: Lystsov, A. I., Bryndin, V. G., and Didyk, Yu. K.

TITLE: Setups for rapid determination of the activity and degree of reduction of nickel powder

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 247-249

TEXT: This is a description of units designed to determine the nickel content of powder used in the cementation of copper from nickel electrolytes. The design of these units is based on the principle that the ferromagnetic properties of the powder are proportional to its degree of reduction. The sample is transferred to a small glass tube 1 (Fig.1) which is suspended from the end of steel spring 3 on the bend 2 of a copper wire; the other end of the spring is attached to the support. Mirror 4 is attached to the mobile end of the spring through a hinge; the mirror rests on rod 5. When electromagnet 6 is switched on, the tube with the sample is drawn into the magnetic field. Thereby, the spring is bent, which actuates the mirror and leads to a deflection of the reflected beam of light. The difference between readings from dial 7 in the presence and absence of a magnetic field depends on the reduction degree

Card 1/3

EWP(k)/EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) WH/WW/JD

ACC NR: AP6012168 SOURCE CODE: UR/0413/66/000/007/0095/0095

INVENTOR: Bryndin, V. G.; Denisov, S. I.; Ognev, R. K. 33 B

ORG: none

TITLE: Sealing or coating porous material with a carbon film.

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 95

TOPIC TAGS: sealing, coating, carbon film

ABSTRACT: An Author Certificate has been issued describing a method of sealing or coating porous materials, such as carbon-graphite or refractory materials, with a carbon film, making use of the thermal decomposition of carbon containing gases. To speed up the process and obtain a dense smooth surface, the work is carried out in a fluidized bed of graphite particles produced by carbon-containing gases while heating both the article being worked on and the carbon gases. [LD]

SUB CODE: 11/ SUBM DATE: 25Jun64

Card 1/1 hs

UDC: 621.793.14

LYSTSOV, A.I.; BRYNDIN, V.G.

Reduction of nickel oxide in a fluidized bed. TSvet. met. 34 no.12:16-21 D '61. (MIRA 14:12)
(Nickel--Metallurgy)
(Fluidization)

MOVSESOV, E.Ye.; BYSTRENIN, M.N.; BRYNDIN, V.G.; DENISOV, S.I.

Production of rich titanium slag from an arizonite concentrate.
Met. i gornorud. prom. no.2:48-50 Mr-Ap '65. (MIRA 18:5)

(N) L 10892-66 EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) MJW/JD/HW

ACC NR: AP6000599 SOURCE CODE: UR/0133/65/000/012/1129/1132

AUTHOR: Bushmakin, Yu. A.; Bryndin, V. V.; Moskvin, N. I.; Grashchenkov, P. M.; Melikhov, P. M.

ORG: none

TITLE: Development of production techniques for Kh15N9Yu strip intended for valve springs

SOURCE: Stal', no. 12, 1965, 1129-1132

TOPIC TAGS: valve, compressor valve, valve spring, spring steel, stainless steel, precipitation hardenable steel, steel property /EI904 steel, Kh15N9Yu steel

ABSTRACT: The suitability of Kh15N9Yu (EI904) precipitation-hardenable stainless steel for flat valve springs of compressors operating in a tropical environment or aggressive gaseous media has been studied. Thirteen experimental 50-kg heats containing 0.05—0.09% carbon, 14.00—15.42% chromium, 7.70—8.63% nickel, and 0.73—1.10% aluminum, and with an initial martensite content varying from 7 to 60%, were melted in a laboratory induction furnace. The ingots were rolled into a strip 2.5 mm thick and 60 mm wide, annealed at 1050—1070C, and water quenched. Then five strips with an initial martensite content of 8, 27, 34, 45 and 60% were cold rolled with reductions up to 80% and aged at 350—500C. Two other heats with an initial martensite content of 20 and 40% received the same treatment, but prior to cold rolling were

Card 1/2 UDC: 669.14.018.27

L 10892-66

ACC NR: AP6000599

2

refrigerated at -70C for 6 hr. Results of tensile tests showed that heats with an initial martensite content over 25% are not suitable for springs owing to low ductility. In steels with an initial martensite content of 5—25%, the mechanical properties can be varied over a very wide range: between 100 kg/mm^2 tensile strength at 30% elongation and 200 kg/mm^2 tensile strength at 2% elongation. For the lowest strength level, 140—170 kg/mm^2, the recommended strengthening treatment (after annealing) consists of cold-rolling with a reduction of 40—50% and aging at 400—480C for 1 hr. For the highest strength level, over 190 kg/mm^2, the annealed strip should be refrigerated at -70C prior to cold rolling and aging. Orig. art. has: 3 figures and 2 tables. [DV]

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 4172

HW

Card 2/2

BRYNDINA, G.P.

The TGS-2 pipe-bending machine. Biul. tekhn.-ekon. inform. no.8:37-38 '58. (MIRA 11:10)
(Pipe bending)

SYRUCEK, L.; BRUCKOVA, M.; BRYNDOVA, D.; ZEMAN, L.

An epidemic of pharyngoconjunctival fever caused by adenoviruses in a children's center. Cesk. pediat. 17 no.11:970-975 N '62.

1. Ustav epidemiologie a mikrobiologie v Praze, reditel prof. MUDr. K. Raska Kojenecky ustav v Praze - Krci, reditel MUDr. L. Zeman.
(ADENOVIRUS INFECTIONS)

18(5) POL/39-59-4-4/14

AUTHOR: Rutkowski, Wladyslaw, Doctor and Bryniarski, J, Engineers

TITLE: Problems of Powder Elastic Strain during Pressing

PERIODICAL: Hutnik, 1959, Nr 4, pp 154-158 (Poland)

ABSTRACT: One of the most interesting and important phenomena to be observed during powder pressing is the elastic strain they exhibit after pressure is released. Some pressed powders crumble after being removed from the matrix. This can be influenced both by the method adopted during pressing and by the properties of the powder itself. The external pressure applied by the press is equal to the powder's reaction. As pressure is increased elastic strain appears and finally, when external pressure passes the point of critical tension the powder is subjected to plastic strain. After pressure is removed, plastic strain remains but only elastic tension is observable. Fig. 1 shows the re-

Card 1/4

Problems of Powder Elastic Strain during Pressing

sults of Balshin's experiments with a Gagarin press. He is of the opinion that strain depends on: the hardness of the materials used, the weight used, its oxidation and granular shape, the role of gases which occupy 80% of the space in the matrix and finally the power of the press itself. Lichtman has found that the use of certain liquid agents decreases elastic strain by spreading tension more evenly and reducing friction. Experiments designed to confirm this were carried out with a press made by the Wolpert Werke. Pressure of from 1 to 15 tons per cm^2 were applied to about 10 mm of various powders (this being their thickness under the press). The materials used were: electrolitic iron, oxidised and non-oxidised, mechanic iron from the Hametag mills, chromium, copper, lead and silver powders. Table 1 gives the physical properties of these materials. Pressing was carried out with these powders in their normal state and again with

Problem of Powder Elastic Strain during Pressing

the powders wtted with a solution of camphor in alcohol (ethyl) and added to make up about 1.5% of the powder's weight. Measurements of the powder's shape were taken to the nearest 1/100th of a mm. Effects of the strain on the press itself were also taken into account. It was found for instance, the matrix was wider by 9/1,000ths of a mm after the experiment. Fig. 2 gives microphotographs of the powder used, Fig 3 results of the experiment without camphor and Fig 4 results with camphor. Figs 5, 6 and 7 give closeups from Figs 3 and 4. Fig 8 sums up the results of the experiment. It was found that, as a whole, elastic strain changes together with pressure. Three general ranges of pressure may be distinguished in this respect: 0-4 t/cm^2; 4-8 t/cm^2 and 8-15 t/cm^2. These are shown in Fig 8 as A,B and C. In general, elastic strain is small in range A while there is still room for compression, it is greatest in range B and again

Card 3/4

decreases in range C where the high pressure applied gives the powder greater cohesion. Another factor effecting strain is the size of the grains. It was found that the smaller the grains, the greater the change in the powder's measurements after removal from the press. It was also found that the degree of oxidation affects strain, increasing it especially in the A range. Finally, it was found that such agents as camphor tend to even out the differences between the three ranges of pressure and make for better all round results of pressing. There are 6 diagrams, 6 photographs, 1 table and 21 references, 9 of which are Polish, 5 Soviet, 4 English, 2 German and 1 Czech

ASSOCIATION: AGH - Krakow Katedra Metalografii (AGH- Cracow Chair of Metallurgy)

BRYNSKI, K. (Lublin)

"The construction of a city and its climate" by Stanislaw Rozanski. Reviewed by K.Brynski. Czasopismo geograficzne 32 no.1:94-95 '61.

BRYNSKI, Kazimierz, mgr.

The 50th anniversary of the First Congress of Pharmaceutists of the Polish Kingdom in Lodz. Farmacja polska 18 no.12:288-289 25 Je '62.

*

35606
S/166/62/000/001/008/009
B125/B104

9.4174
26.1630

AUTHOR: Brynskikh, N. A.

TITLE: The effect of irregular heating of the thermocouples of a pile upon its efficiency

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1962, 84-86

TEXT: The linear drop of the temperature of thermocouple hot junctions and the decrease of the temperature of the hot junctions, distributed over a plane, from the center toward the edges of the surface were investigated. In both cases, $T_k = T_1 - \Delta T(k-1)$. In the case of a linear change the efficiency is $\eta = \frac{\bar{T}_1 - T_o}{\bar{T}_1} \frac{\bar{M} - 1}{\bar{M} + (T_o/\bar{T}_1)}$, where $\bar{T}_1 = T_1 - \Delta T(n-1)/2$, $M = R/r = \sqrt{1 + (\alpha^2\sigma/2\varkappa)(T_1 + T_o)}$, T_1 and T_o are the temperature of hot and

Card 1/3

The effect of irregular heating ...

cold junctions, respectively, α is the coefficient of thermo-emf, σ is the electrical conductivity, κ is the heat conductivity. α, σ, κ are temperature-independent. $\bar{T}$ is the averaged temperature of hot junctions. In addition, the following two-dimensional models of thermopiles were calculated: (1) the pile contains n^2 thermocouples on n concentric circles with (2k-1) thermocouples each. The temperature drops from the central thermocouples with T_1 toward those on the edges with T_n. (2) The thermocouples are arranged on a rectangular area, $4(2k + 1)$ per layer. The temperature drops from T_1 for the four central thermocouples toward T_n for those on the edges. (3) In each series 8 thermocouples are distributed over the area of a rectangle. There temperature drops from T_1 of the central thermocouple, from one hot junction to the other by ΔT, to T_n of the n-th series. In the one-dimensional case, the efficiency is $\eta = \frac{T_1 - T_o}{\bar{T}_i} \frac{M - 1}{\tilde{M} + (T_o/\tilde{T}_i)}$. In the case of piles with many thermocouples, the relation $\tilde{T}_2 = \tilde{T}_3 = \tilde{T}_1 = T_1 - (2/3)(T_1 - T_n)$ is satisfied. $\tilde{T}_i$ is the effective

Card 2/3

temperature. Irregular heating reduces the efficiency. The effective temperature differing from the mean temperature by $(T_1 - T_n)/6$ is the main factor in the calculations of the efficiency. Therefore, the effective temperature should not be replaced by the mean temperature if the differences are considerable. As for thermopiles with a great number of thermocouples, the effective temperature depends on $(T_1 - T_n)$ considerably, but is almost independent of n. If temperature drops from T_1 of the thermocouples at the edges to T_n of the central thermocouple, the effective temperature exceeds the mean temperature. There are 3 figures and 1 Soviet reference.

ASSOCIATION: Tashkentskiy gosuniversitet im. V. I. Lenina (Tashkent State University imeni V. I. Lenin)

SUBMITTED: July 8, 1961

BRYNSKIKH, N.A.

Inductance of a semiconductor diode in pulsed operation. Izv. AN Uz.SSR. Ser. fiz.-mat. nauk 7 no.5:58-62 '63.
(MIRA 17:8)

1. Tashkentskiy gosudarstvennyy universitet imeni Lenina.

L 45178-65 EWT(1)/EEC(k)-2/EEC(b)-2/EWA(h)/T Pm-4/Pz-6/Peb IJP(c)

ACCESSION NR: AP5009147 S/0166/65/000/001/0041/0047

AUTHOR: Brynskikh, N. A.

TITLE: Frequency-phase and transient characteristics of an inductive semiconductor diode

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1965, 41-47

TOPIC TAGS: semiconductor diode, inductive diode, frequency phase characteristic, transient characteristic

ABSTRACT: This is a continuation of earlier work by the author (Izv. AN UzSSR, seriya fiz.-mat. nauk, 1963, No. 5) and deals with the frequency-phase and the transient characteristics of a semiconductor diode with inductive inertia. Analysis is made for a diode in which besides the impurity levels that determine the type of carrier there are also deeper partially-filled impurity levels. For concreteness, a p-type semiconductor is considered under the condition that the signal is small and inverse bias is applied. The inductive character of the diode

Card 1/2

L 45178-65
ACCESSION NR: AP5009147

is connected with generation and recombination of carriers in the space-charge region of the semiconductor rectifier. The analysis is based on linearization of the equations relating the ac voltage and current components, the bias voltage and current, and the particle balance. An equation is then derived relating the input signal with the diode voltage. The transfer function, the phase-frequency relation, and the transient characteristics are treated in standard fashion. An analysis of the results shows that the response to a sinusoidal signal consists of a steady-state sinusoidal component and a damped transient, the damping of which depends on the circuit parameters. Orig. art. has: 3 figures and 24 formulas.

ASSOCIATION: Tashkentskiy gosuniversitet im. V. I. Lenina (Tashkent State University)

SUBMITTED: 30Jan64 ENCL: 00 SUB CODE: EC

NR REF SOV: 006 OTHER: 000

Card 2/2

BRYNSKIKH, Yu.I., inzh.; OREKHOVA, I.Sh.

Determining indices for the total amount of labor expended in the production of glass and ceramics. Stek. i ker. 23 no.1:6-10 Ja '66. (MIRA 19:1)

1. Nauchno-issledovatel'skiy institut ekonomiki i organizatsii proizvodstva, Sverdlovsk.

BRYNSKIY, A.; LOBANOV. S.

Public inspection of savings banks and aid committees.- Fin.SSSR 22 no.5:63-64 My '61. (MIRA 14:5)

1. Nachal'nik upravleniya sberkass Tyumenskoy oblasti (for Brynskiy).
2. Nachal'nik operativnogo otdela upravleniya sberkass Tyumenskoy oblasti (for Lobanov).
(Tyumen' Province—Savings banks)

BRYNSKI, K.

Geography of plants; corn. p. 243.

GEOGRAFIA W SZKOLE. (Ministerstwo Oswiaty, Polskie Towarzystwo Geograficzne)
Vol. 9, no. 5, Sept./Oct. 1956

Warsaw, Poland

SOURCE: East European List (EEAL) Library of Congress,
Vol. 6, No. 1, January 1957

BRYNSKIY, A.

How we fulfilled the deposits plan. Fin. SSSR 19 no.4:58-60 Ap '58.
(MIRA 11:4)

1. Nachal'nik upravleniya gostrudsberkass i goskredita Tyumenskoy oblasti.
(Tyumen' Province--Savings Banks)

BRYNSKIY, A.

How we organize monthly campaigns and depositor evenings.
Fin. SSSR 19 no.9:54-55 S '58. (MIRA 11:10)
(Tyumen Province--Savings Banks)

VOLCHEK, Ol'gerd [Wolczek, Olgierd]; BRYNSKIY, Ye.S. [translator];
KOGAN-BELETSKIY, G.I., kand. tekhn. nauk, nauchn. red.;
ZEL'MANOVA, L.A., red.

[Secrets wrung from heaven. Translated from the Polish]
Tainy pokhishchennye u neba. Leningrad, Gidrometeoizdat,
1965. 167 p. (MIRA 18:8)

BRYNTSEV, A.

Laying the crankshafts of main steam and internal combustion engines on freighters. Mor. flot 23 no.1:31-32 Ja '63. (MIRA 16:4)

1. Starshiy inzh.-inspektor Astrakhanskoy inspektsii Registra SSSR.

(Marine engines)
(Cranks and crankshafts)

POSTOVSKIY, V.A., inzhener; ERYNTSEV, B., inzhener.

Crusher for moist and viscous materials. TSement 22 no.5:28 S-O '56.
(MLRA 10:1)

1. Bryanskiy tsementnyy zavod.
(Bryansk--Cement industries) (Crushing machinery)

SOV/68-59-7-32/33

AUTHOR: Bryntsev, F.I.

TITLE: High Frequency Communication Between Machines of a Coke Oven Plant

PERIODICAL: Koks i khimiya, 1959, Nr 7, pp 76 - 78 (USSR)

ABSTRACT: A loud speaker high frequency communication between the pushing machine and quenching car operators in operation at the Gorlovskiy Coking Works since 1955 is described. There are 2 figures.

ASSOCIATION: Gorlovskiy koksokhimicheskiy zavod (Gorlovskiy Coking Works)

Card 1/1

BRYNTSEV, P.I.

KILESSO, A., YEVDOVIMOV, D., KURPAKOVA, D.,
BRYNTSEV, P., GUSEV, F., MIKOLAYEVSKIY, YU.,
KAZANSKIY, N., BOKATIN, V.,

Forestry Research

Foremost forester of the country. Les i step' 14 No. 5 1952.

Monthly List of Congress, August, 1952. UNCLASSIFIED.

BRYNTSEV, P. I.

Dissertation: "Phytoncidal Properties of the Principal Ligneous and Brushwood Varieties of the Green Areas of Moscow." Cand Agr Sci, Moscow Forestry Engineering Inst, 14 Apr 54. (Vechernyaya Moskva, Moscow, 5 Apr 54)

SO: SUM 243, 19 Oct 54

ZAYTSEV, Boris Dmitriyevich, doktor sel'khoz. nauk; ZONN, S.V., doktor sel'khoz. nauk, retsenzent; KOLYUKAYEVA, M.P., prep. retsenzent; BRYNTSEV, P.I., red.

[Soil science] Pochvovedenie. 2. izd. Moskva, Lesnaia promyshlennost', 1965. 367 p. (MIRA 18:6)

BRYNZA, A. P:

USSR/Physics - Solid State Physics Nov 53

"Conference on the Liquid State of Matter, Held 28-30 May 1953 at Kiev by the Academy of Sciences, Ukrainian SSR, and Kiev State University im T. G. Shevchenko," S. D. Ravikovich, G. P. Roshchina and A. F. Skryshevskiy

Usp Fiz Nauk, Vol 51, No 3, pp 393-405

Summarize reports by the following: V. I. Danilov, on scattering of x-rays in liquids; A. F. Skryshevskiy, on x-ray study of solns of KOH, NaOH, LiOH, LiCl, and H_2SO_4; Ye. A. Foray-Koshits, on integral analysis of intensity curves; P. V. Deragin, Ye. G. Shvidkovskiy, G. Ya. Samoylov et al. on x-ray studies of liquid structure; A. Z. Golik, on characteristics of molecular structure of liquids; I. V. Radchenko, on modeling of liquids; F. K. Shestakovich, on new liquid models and influence of central and dipole forces on close ordering; A. Z. Golik and his associates S. D. Ravikovich, A. V. Orishchenko, V. P. Solomko, and N. A. Ryndich, on viscosity and density of matter in the liquid state; V. M. Chulanovskiy and D. S. Kamenetskaya, on the influence of molecules' size and the intermolecular intensity on viscosity coeff; A. P. Prynza, on thermo-diffusion in binary systems; S. S. Urazovskiy, presence of grouping of identical atoms; A. R. Regel', on relation between electrical properties and structure of liquids; M. F. Vuks, on light-dispersion method for studying liquids' structure.

AFANAS'YEV, A.S.; BRYNZA, A.P.; GERASYUTINA, L.I.; LYSENKO, G.I.

Effect of urotropine on the acid corrosion of steel. Ukr.khim. zhur. 25 no.1:73-80 '59. (MIRA 12:4)

1. Dnepropetrovskiy metallurgicheskiy institut, kafedra fizicheskoy khimii i Dnepropetrovskiy gosuniversitet, kafedra neorganicheskoy khimii.
(Hexamethylenetetramine) (Steel--Corrosion)

AFANAS'YEV, A.S.; BRYNZA, A.P.; GERASYUTINA, L.I.

Effect of urotropine on the acid corrosion of steel. Ukr. khim. zhur. 26 no.6:723-729 '60. (MIRA 14:1)

1. Dnepropetrovskiy gosudarstvennyy universitet, kafedra neorganicheskoy khimii, i Dnepropetrovskiy metallurgicheskiy institut, kafedroy fizicheskoy khimii.
(Hexamethylenetetramine) (Steel—Corrosion)

ACCESSION NR: AT4010282 S/3053/62/000/000/0397/0403

AUTHOR: Bry*nza, A. P.; Gerasyutina, L. I.; Kryachek, T. N.

TITLE: The influence of organic additives on the solubility of titanium in sulfuric acid

SOURCE: Trudy* Vsesoyuznoy mezhvuzovskoy nauchnoy konferentsii po voprosam bor'by* s korroziyey, Baku, 1962. Moscow, 1962, 397-403

TOPIC TAGS: titanium, sulfuric acid, corrosion, corrosion rate, organic additive, corrosion inhibitor, corrosion passivation, metal oxidation

ABSTRACT: The solubility of titanium in 5N H_2SO_4 was studied by the gravimetric and chronopotentiometric methods before and after organic substances such as thiourea, diphenylamine, diethylaniline and o,o diethyl-o-[bis-N-β-hydroxyethyl p-aminophenyl] thiophosphate (additive A) were added. The first additive was anionic in character, the second and third either molecular or cationic in character. The rate of corrosion of Ti was recorded as a function of time. In the first two hours, no corrosion losses were observed; after 8 hours, the first maximum was attained; the corrosion losses remained constant during the following 120 hours, and a second maximum rate of corrosion was observed after 480 hours.
Card 1/3

ACCESSION NR: AT4010282

The organic additives acted as corrosion inhibitors during the first 10 days. Thiourea appeared to be more effective than diphenylamine or diethylaniline. Measurements of the changes in potential showed that the periods in the dissolution of titanium are: (1) induction period; Ti is not dissolved, its potential $\varphi = +220$ mV. This period is due to the natural oxide film on the Ti surface. (2) a period corresponding to the first maximum in the corrosion rate. For this period $\varphi = -380$ mV and the corrosion rate = 540 grams per sq. meter per hour. (3) partial passivation period; this is characterized by potential $\varphi = +40$ mV and a corrosion rate of 380 $g/m^2/hr$. This passivation period is due to the oxidation of Ti^{3+} to Ti^{4+} by air and accumulation of the Ti^{4+} ions on the titanium surface. The Ti^{4+} ions act as corrosion inhibitors. (4) this period corresponds to the second maximum in the corrosion rate. The corrosion rate is 600 $g/m^2/hr$. and potential $\varphi = -290$ mV. The organic additives were found to increase the anodic polarization of titanium. The anionic additives can be used as corrosion inhibitors because they prolong the induction period, while additive A completely prevents corrosion by formulation of an insoluble film. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: Dnepropetrovskiy gosudarstvenny*y universitet (Dniepropetrovsk State University)

Card 2/3

ACCESSION NR: AT4010282

SUBMITTED: 00 DATE ACQ: 28Jan64 ENCL: 00

SUB CODE: MM NO REF SOV: 007 OTHER: 006

Card 3/3

1.1600

S/226/62/000/001/012/014
I003/1201

Authors: Brynza, A. P., and Krivun, S. V.

Title: AN ELECTROLYSER FOR PREPARING COPPER POWDER.

Periodical: *Poroshkovaya metallurgiya*, no. 1(7), 1962, 72–74

Text: An electrolyzer for preparing copper powder by cathodic reduction of copper oxide from a 1*N* solution of NaOH is described. The reduction, removal of the electrolyte and drying of the powder are carried out in a single device which permits the production of a powder with a low oxide content without recourse to stabilizers. There is one figure.

Association: Dnepropetrovskiy gosadarstvennyy universitet im. 300-letiya vossoyedineniye Ukrainy s Rossiey. (Dnepropetrovsk State University im. 300 yrs. of the Union of Ukraine and Russia).

Submitted: July 25, 1961

Card 1/1

BRYNZA, A.P.; KRIVUN, S.V.

Electrolytic cell for the preparation of copper powder. Porosh. met. 2 no.1:72-74 Ja-F '62. (MIRA 15:8)

1. Dnepropetrovskiy gosudarstvennyy universitet imeni 300-letiya vossoyedineniya Ukrainy s Rossiyey.
(Electrolysis--Equipment and supplies) (Metal powders)

37626
S/073/62/028/003/004/004
B110/B101

18.1161

AUTHORS: Brynza, A. P., Gerasyutina, L. I., Kryachek, T. N.

TITLE: Effect of organic additions on the dissolution of titanium in sulfuric acid

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 28, no. 3, 1962, 396-400

TEXT: The corrosion of titanium BT-1 (VT-1) in 5 N H_2SO_4 was studied gravimetrically and chronopotentiometrically in the presence of: thiourea, diphenyl amine, diethyl aniline and 0,0-diethyl-o-[bis-N-β-oxyethyl paraamino phenyl]-thiophosphate (A) at 25±0.5°C. A was obtained by condensation of N-bis-β-oxyethyl paraamino phenol with 0,0-diethyl chloro thiophosphate; it was readily soluble in sulfuric and hydrochloric acids and in alkalis and had a m.p. of 71-72°C. (1) Gravimetric measurements: When titanium was immersed for 35 days in acid containing A the loss in weight amounted to $\leqslant$ 10-12 mg/16 cm^2 surface ($V = 0.0009\ g/m^2 \cdot hr$). When the sample thus treated was immersed into non-inhibited 5 N H_2SO_4 it did

Card 1/4

Effect of organic additions on the ...

not dissolve. Using 5 N H_2SO_4, and after admixture of thiourea, diphenyl amine, or diethyl aniline, corrosion losses were absent in the first 2 hrs, reached a maximum after 8 hrs and remained constant in the ensuing 112 hrs. Subsequently, they first decreased and then increased again after 480 hrs. After 840 hrs the rate of dissolution amounted to 0.60, 0.64, 0.66, and 0.65 $g/m^2 \cdot hr$, respectively. (2) Electrode potentials: φ varies with time from positive to steady negative values and, after a certain increase, again reaches maximum negative values. The passivation potential of titanium in 5 N H_2SO_4 is 200 mv, the negative activation potential after 3 hrs -380 mv. Thiourea effects a shortening of the induction period and a retardation of the activation period. High positive φ values in solutions containing A prove the absence of corrosion. (3) Polarization of titanium: At 5-100 $\mu a/cm^2$, φ increases up to almost activation potential. It becomes more negative than the activation potential when $i > 100\ \mu a/cm^2$. With anodic polarization φ increases for all values of i with the time and becomes steady after 1 hr when $i > 100\ \mu a/cm^2$, or after 2 hrs when i is

Card 2/4

Effect of organic additions on the ...

lower. Additions have no effect upon the cathodic polarization of titanium. Passivation decreases as follows: A > thiourea > diethyl aniline > diphenyl amine. Dissolution of titanium in 5 N H_2SO_4 is a 4-stage process: (a) induction period, absence of dissolution, φ = 220 mv; (b) first period of maximum rate, maximum dissolution (540 $g/m^2 \cdot hr$), φ = -380 mv; (c) partial passivation, decrease of dissolution rate (380 $g/cm^2 \cdot hr$), φ = 40 mv; (d) second period of maximum rate, high corrosion losses (600 $g/m^2 \cdot hr$), φ = -290 mv. In (a) the Ti surface is covered with a natural film of oxide, in (c) Ti^{4+} ions accumulate owing to dissolution of the oxide film and oxidation of Ti^{3+} to Ti^{4+} by atmospheric oxygen. In (d) Ti^{4+} is reduced presumably to Ti^{3+} (φ = 40 mv; $Ti^{4+}/Ti^{3+} \cong 0.1$ v). Since (c) was not observed in the case of additions, these are presumed to delay the oxidation of Ti^{3+} to Ti^{4+} (4 hrs, thiourea). Addition of A renders the Ti surface positive (φ = 220 mv). The high efficiency of A is presumably due to the formation of a visible grey surface film which

Card 3/4

is resistant to 5 N H_2SO_4. A is chemisorbed on the oxidized metal surface and forms a film of optimum acid-resistance. There are 5 figures and 1 table.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet
(Dnepropetrovsk State University)

SUBMITTED: July 11, 1960

Card 4/4

MAKSIMYCHEVA, Z.T.; BABAYEV, A.; FEL'DMAN, M.M.; BRYNZA, A.P.; DEGTYARENKO, Ya.A.; NAGIBIN, V.S.; ARKHIPOVA, A.V.

Exchange of experience. Zav.lab. 28 no.4:426-427 '62. (MIRA 15:5)

1. Tashkentskiy gosudarstvennyy universitet imeni Lenina (for Maksimycheva, Babayev). 2. Dnepropetrovskiy gosudarstvennyy universitet (for Fel'dman, Brynza). 3. L'vovskiy politekhnicheskiy institut (for Degtyarenko). 4. Institut metallurgii imeni Baykova (for Nagibin, Arkhipova).

(Metals--Analysis)

BRYNZA, A.P.; GERASYUTINA, L.I.

Derivatives of aniline and phenol as effective inhibitors of titanium corrosion in hydrochloric acid. Ukr.khim.zhur. 28 no.9:1066-1068 '62. (MIRA 15:12)

1. Dnepropetrovskiy gosudarstvennyy universitet.
(Titanium—Corrosion)
(Aniline) (Phenol)

35790

S/080/62/035/003/023/024
D217/D302

12.8310

AUTHORS: Brynza, A. P. and Gerasyutina, L. I.

TITLE: Organic inhibitors of the corrosion of titanium in sulphuric acid

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 683-685

TEXT: Cold rolled titanium castings 1.5 mm thick were used for the investigation. A gravimetric study of the influence of organic additions in 5 N H_2SO_4 at room temperature was carried out. The following organic additions were used: Thiourea and its derivatives (diphenyl thiourea, phenyl thiourea, ethoxy-phenyl-thiourea, o-tolyl thiourea, thiosemicarbazide), urotropine, phenol and its derivatives (p-aminophenol, p-nitrophenol, o-nitrophenol, 2.4-dinitrophenol, p-anisidine, dinitrophenetol, p,m-nitroaniline, diethylaniline), benzene, nitrobenzene, o-nitroanisol, p-phenylene diamine, phenylhydrazine and diphenylamine. The weights of additions made to the solution were 0.1, 0.5, 1, 2, 3, 5 and 10 mmol/l. Prior to the commencement of the experiments, the specimens were

Card 1/3

Organic inhibitors of ...

etched in a hot 5 N H_2SO_4 solution for 3 - 5 minutes and rinsed with water, dried and rubbed with 00 emery paper and degreased. The duration of the experiments varied from 16 hours to 30 days. It was found that p-nitroaniline, m-nitroaniline, p-aminophenol (oxidized), p-nitrophenol, 2.4-dinitrophenol, nitrobenzene and o-nitroanisol act as corrosion inhibitors. Thiourea and its derivatives, urotropine, p-phenylenediamine, phenylhydrazine, p-aminophenol (purified), aniline, benzene, phenol, diphenylamine, diethylaniline, p-anisidine and o-nitrophenol had no effect. It is suggested that p-aminophenol (oxidized) and its nitro-derivatives should be effective inhibitors in HCl. A characteristic peculiarity of the above inhibitors is their ability to protect the surface of titanium completely, i.e. the latter is passivated. There are 3 tables and 8 references: 3 Soviet-bloc and 5 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: H. H. Uhlig and A. Geary, J. Electrochem. Soc., 101, 215, (1954); D. Schlain and J. S. Smatko, J. Electrochem. Soc., 99, 417, (1952); M. E. Straumanis and C. B. Gill, J. Electrochem. Soc., 101,

Organic inhibitors of ...

11, (1954); M. E. Straumanis, S. T. Shin and A. W. Schlechten, J. Electrochem. Soc., 102, 7, 573, (1955).

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet, kafedra neorganicheskoy khimii (Dnepropetrovsk State University, Department of Inorganic Chemistry)

SUBMITTED: April 24, 1961

Card 3/3

BRYNZA, A.P.; RYNSKAYA, Ye.S.; GRECHANOVSKIY, V.F.; GRISHKO, N.I.; ZHURBA, T.V.

Atmospheric corrosion of copper powder in the presence of sulfur dioxide. Zhur. prikl. khim. 36 no.9:1936-1942 D '63. (MIRA 17:1)

1. Dnepropetrovskiy gosudarstvennyy universitet imeni 300-letiya vossoyedineniya Ukrainy s Rossiyey.

GERASYUTINA, L.I.; BRYNZA, A.P.

Effect of p-nitroaniline on titanium corrosion in hydrochloric acid. Zhur. prikl. khim. 36 no.10:2205-2210 O '63. (MIRA 17:1)

YAMPOL'SKAYA, R.B.; POGOREL'SKIY, Ye.I.; BRYNZA, A.P.

Obtaining iron powder from pure finely dispersed ferrite.
Zhur. prikl. khim. 36 no.10:2300-2302 O '63.
(MIRA 17:1)

1. Dnepropetrovskiy gosudarstvennyy universitet imeni 300-letiya vossoyedineniya Ukrainy s Rossiyey.

ACCESSION NR: AP4010482 S/0080/64/037/001/0095/0099

AUTHOR: Gerasyutina, L. I.; Bry*nza, A. P.

TITLE: Effect of urotropine and potassium iodide on the corrosion of titanium in sulfuric and hydrochloric acids.

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 1, 1964, 95-99

TOPIC TAGS: titanium, corrosion, corrosion inhibition, passivation, urotropine, urotropine potassium iodide mixture

ABSTRACT: In studying the corrosion resistance of titanium (VT1-2) in different concentrations of H_2SO_4 and HCl at 20C and 100C in the presence of urotropine, KI, or mixtures of the two, it was established that the protective action of urotropine does not exceed 70% in 5-7N HCl and in 5-10N H_2SO_4 solutions. Urotropine is most effective in 10N HCl at 20C (83% protection) and in 25N H_2SO_4 at 100C (97% protection). KI intensifies the protective action of urotropine in 25N H_2SO_4; a 100% effective mixture at 20C contains 500 mmol./l.

ACCESSION NR: AP4010482

of urotropine and 5 g./1. KI. In 10N H_2SO_4 at 100C, 500 mmol./1. urotropine and 30 g./1. KI affords 94% protection. 30 g./1. KI passivates titanium in 5 and 10N H_2SO_4 and in 5 and 7N HCl solutions at 20C. The complex ion I_3^-, formed by oxidation with atmospheric oxygen, plays the main role in the process of passivating titanium. Orig. art. has: 5 figures and 2 equations.

ASSOCIATION: Dnepropetrovskiy gosudarstvenny*y universitet (Dnepropetrovsk State University)

SUBMITTED: 06Jul62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: CH, ML NO REF SOV: 014 OTHER: 002

Card 2/2

ACCESSION NR: AP4010483 S/0080/64/037/001/0099/0102

AUTHORS: Bry*nza, A. P.; Gerasyutina, L. I.

TITLE: Influence of some aniline and phenol derivatives on the corrosive and electrochemical behavior of titanium in sulfuric acid.

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 1, 1964, 99-102

TOPIC TAGS: titanium, corrosion resistance, electrochemical properties, equilibrium potential, passivation, corrosion inhibitor, p-aminophenol, p-nitrophenol, p-nitroaniline

ABSTRACT: The corrosion resistance and electrochemical properties of titanium (VT1-2) were studied in 10N H_2SO_4 at 20°, 40° and 60° in the presence of p-aminophenol, p-nitrophenol, and p-nitroaniline. p-Aminophenol shows corrosion inhibiting action only when there is an oxide film on the titanium surface. p-Nitrophenol is a corrosion inhibitor for titanium in 10N H_2SO_4 only at 20°, the other two inhibitors are effective at 20-60°. The inhibiting action of these materials is associated with shifting the equilibrium potential

Card 1/2

ACCESSION NR: AP4010483

of titanium to a more positive region than the potential of its complete passivation. Orig. art. has: 5 Figures and 1 Table.

ASSOCIATION: Dnepropetrovskiy gosudarstvenny*y universitet (Dnepropetrovsk State University)

SUBMITTED: 10Jul62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: CH, ML NR REF SOV: 004 OTHER: 001

Card 2/2

ACCESSION NR: AP4018068 S/0080/64/037/002/0367/0373

AUTHORS: Bry*nza, A.P.; Gerasyutina, L.I.

TITLE: Effect of urotropine on the corrosive and electromechanical behavior of titanium in hydrochloric acid solutions.

SOURCE: Zhurnal prikladnoy khimii, v.37, no.2, 1964, 367-373

TOPIC TAGS: titanium, corrosion, electrochemical behavior, urotropine, titanium activation, titanium passivation, potentiostatic polarization, acid corrosion

ABSTRACT: The possibility of using urotropine to protect titanium from acid corrosion was investigated. Urotropine has no effect on the temperature coefficient of the rate of reaction of HCl solutions on Ti (VT1-2) in the temperature interval 20-100C. The behavior of titanium under these conditions was studied by the potentiostatic polarization method. Increasing the concentration and temperature of the acid solutions containing urotropine shifts the titanium passivation and activation potentials in the direction of positive

Card 1/2

ACCESSION NR: AP4018068

values, i.e., its passivation is retarded. Urotropine is most effective in concentrated HCl at 20C and in 7 N HCl at 100C. Orig. art. has: 10 figures.

ASSOCIATION: Dnepropetrovskiy gosudarstvenny*y universitet (Dnepropetrovsk State University)

SUBMITTED: 080ct62 DATE ACQ: 19Mar64 ENCL: 00

SUB CODE: ML, CH NR REF SOV: 012 OTHER: 002

Card 2/2

L 20760-65 EPF(c)/EPR/EPA(s)-2/EWP(j)/EWT(m)/EWP(b)/T/EWA(d)/EWP(t)
Pc-4/Pr-4/Ps-4/Pt-10 IJP(c)/ASD(f)-3/ASD(m)-3 RM/WW/MJW/JD/WB
ACCESSION NR: AP5000479 S/0073/64/030/011/1227/1234

AUTHOR: Bry*nza, A. P.; Gerasyutina, L. I.

TITLE: Investigation of the corrosion of titanium in acid medium in the presence of urotropine, potassium iodide and their mixtures

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 11, 1964, 1227-1234

TOPIC TAGS: titanium, corrosion resistance, passivation, anodic polarization, cathodic polarization, corrosion inhibition

ABSTRACT: The corrosion resistance of VT1-2 titanium in H_2SO_4 of different concentrations at 20-100C in the presence of urotropine, potassium iodide and their mixtures was investigated. The anodic and cathodic polarization of titanium was studied by the potentiostatic method. As the temperature and acid concentration increased the titanium passivation current and the titanium activation potential shifted toward the positive direction making passivation more difficult. Urotropine was found to be a combined cathodic- anodic inhibitor of titanium corrosion:

Card 1/2

L 20760-65
ACCESSION NR: AP5000479

Proportionally to its concentration it reduced the anodic passivation current and increased the overvoltage of the cathoidic process, facilitating the onset of passivation. Potassium iodide passivated the titanium surface in the presence of oxides only when the iodide ion was oxidized in solution to molecular iodine; it delayed the induction period of titanium dissolution. Potassium iodide enhanced the protective effect of urotropine at 20C: 500 mmol/l urotropine and 30 g/1 KI was most effective in 25N H_2SO_4, almost completely protecting the titanium for a month, where the sample would have completely dissolved in 10 days without the inhibitors. At 100C the addition of KI did not improve the inhibiting action of urotropine. Orig. art. has: 10 figures and 1 table

ASSOCIATION: Dnepropetrovskiy gosudarstvenny*y universitet (Dnepropetrovsk State University)

SUBMITTED: 08Oct62 ENCL: 00

SUB CODE: IC, GC NO REF SOV: 012 OTHER: 002

Card2/2

L 16663-65 EWT(m)/EPF(c)/EWA(d)/EWP(j)/EWP(t)/EWP(b) Pc-4/Pr-4 IJP(c)/
RPL/ASD(f)-2/ASD(m)-3 RM/JW/MJW/JD/WB
ACCESSION NR: AP4044745 S/0153/64/007/003/0450/0455

AUTHOR: Bry*nza, A. P.; Gerasyutina, L. I.; Khmelovskaya, S. A. B

TITLE: Effect of nitro derivatives of aniline and phenol on the electrochemical behavior of titanium and steel in sulfuric and hydrochloric acid solutions

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 7, no. 3, 1964, 450-455

TOPIC TAGS: titanium, steel, galvanostatic polarization, electrochemical behavior, nitroaniline, nitrophenol, corrosion inhibition, nitro group position, oxidizing agent, cathodic process, anodic process, protective film formation, electrode passivation, cathodic depolarizer, anodic polarizer

ABSTRACT: The differences in the action of nitro derivatives of aniline and phenol and the effect of the position of the nitro group in the molecules on the electrodic processes occurring on titanium and steel in acid corrosion were investigated. The galvanostatic polarization of VT1-2 titanium and 08 KP steel was determined in 10N H_2SO_4 and in 7N HCl without inhibitor and with up to 50 mmol/l of the ni-

Card 1/3

L 16663-65

ACCESSION NR: AP4044745

2

tro derivatives. Titanium was readily passivated; therefore the nitroanilines and nitrophenols, fairly weak oxidizing agents, effectively inhibited titanium corrosion in H_2SO_4 and in HCl. They rapidly retarded the cathodic process of titanium corrosion by forming a protective film on its surface. With low concentrations of nitroanilines (10 mmol/l) the electrode passivation was unstable, but with 30 mmol/l nitroaniline the cathodic current exceeded the titanium solution current and the surface passivation was stable. Nitrophenols behave similarly to the nitroanilines, only the stationery potential of titanium in their presence was less positive than with nitoranilines. The oxidation ability of the nitro derivatives increased with increase in their dipole moment; p-nitroaniline was the most effective corrosion inhibitor for titanium in the HCl and H_2SO_4 solutions. Steel is passivated with difficulty; the nitroanilines and nitrophenols did not form protective films and the steel was intensively dissolved and polarized at very high current densities. Effective corrosion inhibitors on steel were also strong oxidizing agents. The nitroanilines and nitrophenols were effective depolarizers of cathodic and weak polarizers of anodic processes of dissolving steel in HCl and H_2SO_4, with the o- and p- derivatives having the greatest depolarizing action.

18

Card 2/3

L 16663-65
ACCESSION NR: AP4044745

Orig. art. has: 6 figures

ASSOCIATION: Dnepropetrovskiy gosudarstvenny*y universitet Kafedra neorganicheskoy khimii (Dnepropetrovsk State University, Department of Inorganic Chemistry)

SUBMITTED: 15Jul63 ENCL: 00

SUB CODE: MM NO REF SOV: 011 OTHER: 001

Card 3/3

BRYNZA, A.P.; GERASYUTINA, L.I.

Investigation of titanium corrosion in sulfuric acid in the presence of urotropine, potassium iodide, and their mixtures. Ukr. khim.zhur. 30 no.11:1227-1234 '64. (MIRA 18:2)

1. Dnepropetrovskiy gosudarstvennyy universitet.

BRYNZA, A.P.; GERASYUTINA, L.I.

Effect of urotropine on the corrosion and electrochemical behavior of titanium in hydrochloric acid solutions. Zhur. prikl. khim. 37 no.2:367-373 F '64. (MIRA 17:9)

1. Dnepropetrovskiy gosudarstvennyy universitet.

BRYNZA, A.F.; RYNDYAYA, Ye.S.; SMOVIDORENKO, M.P.; FILIMONENKO, L.T.

Atmospheric corrosion of waterproofed copper powders in the presence of sulfur dioxide. Zhur. prikl. khim. 37 no.6:1376-1380 Je '64. (MIRA 18:3)

L 61070-65 EPF(c)/EWP(k)/EWP(z)/EWT(m)/EWP(b)/EWA(d)/EWP(e)/EWP(t) Pf-4 IJP(c)
MJW/JD/WB

ACCESSION NR: AP5018268 UR/0226/65/000/007/0001/0007

AUTHOR: Brynza, A. P.; Kormshchikova, N. A.; Rynskaya, Ye. S.

TITLE: Sorption properties of metallic powders

SOURCE: Poroshkovaya metallurgiya, no. 7, 1965, 1-7

TOPIC TAGS: iron powder, copper powder, hydrophobized powder, powder corrosion, water vapor adsorption, powdered metal sorption

ABSTRACT: One of the basic properties of metallic powders, which depends on their composition and specific surface area, is their ability to adsorb gases and water vapor which, in turn, determines their corrosion resistance. The authors studied the adsorption of water vapor on iron and copper powders produced by cathode reduction of difficultly soluble compounds, and on APZhM iron powder. In addition, they studied the sorption properties of the products of corrosion of these powders when produced within a medium containing sulfur dioxide. Tests show that the adsorption of water vapor on hydrophobized powders is 2.5 to 10 times smaller and on corrosion products 2.5-80 times larger than in unprotected metallic powders. The products of corrosion

Card 1/2

L 61070-65

ACCESSION NR: AP5018268

4

of the iron powder alloyed with manganese are less hygroscopic than the corrosion products of the nonalloyed powder. The sorption isotherms and heat of adsorption obtained indicate that at room temperature there are no chemisorption effects on the powders under investigation. The specific surface area of the powders is between 3.2 and 6.2 m^2/g. Finally, powders hydrophobized by the method of A. I. Levin and A. V. Pomosov (DAN SSSR, 6, 1075, 1950) increase by 20-25% the value of the critical humidity during corrosion tests of these powders in the presence of 1 vol. % of SO_2. Orig. art. has: 3 formulas, 7 figures, and 3 tables.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

55, 44

SUBMITTED: 22Jul64 ENCL: 00 SUB CODE: MM

NO REF SOV: 013 OTHER: 004

Card 2/2

BRYNZA, A.P.; KORMSHCHIKOVA, N.A.

Atmospheric corrosion of iron powders in the presence of sulfur dioxide. Porosh.met. 5 no.12:48-53 D '65.
(MIRA 19:1)

1. Dnepropetrovskiy gosudarstvennyy universitet imeni 300-letiya vossoyedineniya Ukrainy s Rossiyey. Submitted March 20, 1965.

L 10347-67 EWP(k)/EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6031592 (A) SOURCE CODE: UR/0226/66/000/008/0013/0017

AUTHOR: Brynza, A. P.; Kormshchikova, N. A.

ORG: Dnepropetrovsk State University im. 300-years of the Reunion of the Ukraine with Russia (Dnepropetrovskiy gosudarstvennyy universitet)

TITLE: Protection of iron powder by treatment with solutions of azelates of heavy metals

SOURCE: Poroshkovaya metallurgiya, no. 8, 1966, 13-17

TOPIC TAGS: iron powder, iron corrosion, anticorrosive agent, anticorrosive additive, heavy metal azelate

ABSTRACT: The authors conducted an investigation on the protection of iron powder against corrosion by a treatment with 0.5% solutions of lead, calcium, barium and zinc azelates, sodium benzoate, hexamethylenediamine, triethanolamine oleates, and laundry soap. The treated powders were tested in air at a relative humidity of 75%, a sulfur dioxide content of 0.01 and 0.1%, and at a temperature of 17C. It was found that azelates of heavy metals showed the best protective properties due chiefly to their water-repelling effect. For example, iron powder treated with an azelate did not show any corrosion after 300 hr of exposure to sulfur dioxide, while iron powder saturated with laundry soap started to corrode after 100 hr. Orig. art. has: 4 figures and 1 table. [TD]

SUB CODE: 11/ SUBM DATE: 26Jun65/ ORIG REF: 012/ OTH REF: 003

Card 1/1 nle

L 34424-66 EWT(m)/EWP(t)/ETI IJP(c) JD/WB
(N)

ACC NR: AP6003319 SOURCE CODE: UR/0365/66/002/001/0038/0040

AUTHOR: Brynza, A. P.; Fedash, V. P.; Kovtun, V. N. 33 32 B

ORG: Dnepropetrovsk State University (Dnepropetrovskiy gosudarstvennyy universitet)

TITLE: Determination of impedance of titanium electrodes during anode polarization in sulfuric acid 27

SOURCE: Zashcita metallov, v. 2, no. 1, 1966, 38-40

TOPIC TAGS: electrode, titanium, electric impedance, polarization, electric potential

ABSTRACT: The resonance method described by V. N. Kovtun and V. P. Galushko (Zh. fiz. khimii, 1965, 39, 1028) was used for measuring the impedance components (polarization capacitance C_s and active component of resistance R_s) as a function of frequency of a Ti electrode, made of titanium 37 BT-1 (electrode surface 0.25 cm^2), in 5N H_2SO_4. The maximum C_s and the minimum R_s were observed during anode polarization in 5N H_2SO_4 solution within the potential range from stationary to complete passivation (-0.07 v). These extreme points corresponded to the potential of the beginning of passivation (-0.2 v). During displacement of the potential

Card 1/2 UDC: 541.138.2

to the side of positive values, the increase in C_s and decrease in R_s were observed in the active state region. The transition of Ti from the active to the passive state was accompanied by a decrease in C_s and an increase in R_s which were followed by gradual changes in the values of the impedance of the electrode. This was contrary to the behavior of metals passivated[18] with the formation of a dense oxide film. In addition, a large dependence of C_s on the frequency of the a.c. was observed in the same region of potentials (from -0.2 to ~0.7 v). All these facts indicated the absorption mechanism of passivation (adsorption of oxygen). The C_s changed little and practically did not depend on the frequency in the region of potentials from +0.2 to +0.75 v. But R_s, at the same potentials, increased sharply. This type of change is usually related to the formation of a stable oxide film on the surface of the electrode. Therefore, the passivating layer on the Ti electrode had a different nature in different regions of potentials: the adsorption of oxygen within a potential range from ~0.2 to ~0.7 v and the presence of a stable oxide film at more positive values of potential (from +0.2 to +0.75 v). Orig. art. has: 4 fig.

SUB CODE: 09/ SUBM DATE: 27Jul65/ ORIG REF: 009/ OTH REF: 003

ACC NR: AP6036110 (N) SOURCE CODE: UR/0365/66/002/006/0664/0667

AUTHOR: Brynza, A. P.; Gerasyutina, L. I.

ORG: Dnepropetrovsk State University (Dnepropetrovskiy gosudarstvennyy universitet)

TITLE: The mechanism of the action of mononitroanilines and mononitrophenols on the corrosion of titanium in sulfuric and hydrochloric acids

SOURCE: Zashchita metallov, v. 2, no. 6, 1966, 664-667

TOPIC TAGS: corrosion, titanium ~~corrosion~~, corrosion inhibitor, ~~inhibition mechanism~~

ABSTRACT: Mononitroanilines and mononitrophenols were shown to be effective inhibitors of titanium corrosion in sulfuric and hydrochloric acids at temperatures up to 100C (Fig. 1). The corrosive media tested were 5N, 7N and 10N HCl and 5N, 10N and 25N H_2SO_4 with 0, 100, 200 or 500 m mol/ℓ n-nitroaniline added. The mechanism of inhibitors' action can be that of pure oxidation, chemisorption, or combination of

 UDC: 620.197.3

ACC NR: AP6036110

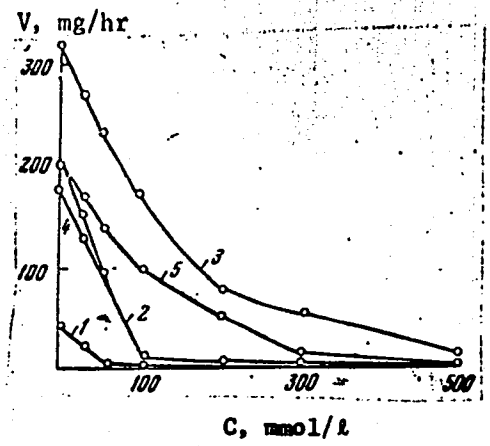


Fig. 1. Dependence of the titanium corrosion rate on the concentration of n-nitroaniline in sulfuric and hydrochloric acids at 100C

1—3 - 5; 7; 10 n. HCl; 1, 4, 5 - 5; 10; 25 n. H_2SO_4.

both, depending on the acid temperature and concentration. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 13Jul65/ ORIG REF: 012/ ATD PRESS: 5106

Card 2/2

ACC NR: AP6036891 (N) SOURCE CODE: UR/0226/66/000/011/0001/0006

AUTHOR: Brynza, A. P.; Rodak, Yu. P.

ORG: Dnepropetrovsk State University (Dnepropetrovskiy gosudarstevnnyy universitet)

TITLE: Atmospheric corrosion of cobalt powder

SOURCE: Poroshkovaya metallurgiya, no. 11, 1966, 1-6

TOPIC TAGS: corrosion, cobalt powder, cobalt powder corrosion, atmospheric humidity, metal oxidation

ABSTRACT: An investigation was made to determine the granulometric composition and specific surface of cobalt powder obtained by the cathodic reduction of basic cobalt carbonate. The powder is found to have a highly developed surface. The powder granules consist of finer particles 0.5—1.0 μ in size. The atmospheric corrosion of cobalt powder has been investigated in the presence of sulfur dioxide and without it. It is established that the sulfur dioxide decreases the value of critical humidity from 75—80 to 20%. The aggressive effect of sulfur dioxide increases with an increase in relative humidity, as well as the

ACC NR: AP6036891

degree of oxidation and the specific surface of the powder. The corrosion of the powder with time in the presence of sulfur dioxide follows a parabolic pattern shown in the formation of protective films consisting of corrosion produced on the powder's surface. The effect of sulfur dioxide on the corrosion of cobalt powder and metals of the iron group is conditioned both by the acceleration of the cathodic process and by the oxidation of SO_2 to sulfuric anhydride, followed by the formation of sulfuric acid which destroys the protective films on the metals. Orig. art. has: 6 figures and 2 tables. [Based on authors' abstract] [NT]

SUB CODE: 11/ SUBM DATE: 15Jan66/ ORIG REF: 010/

Card 2/2

BRYNZA, F. G.

4648. Kolkhoznaya brigada v bor'be za vysokiy vrozhay plodov. (Rasskaz brigadira kolkhoza im. molotova suslen. rayona. Zapisal L. E. Rybak) Kishinev, gosizdar moldavii, 1954. 16s. s. ill 17 sm. (Glav. upr. s-kh propagandy i nauki mcx mccp. B-chka kolkhoznika). 3.000 ekz . 10 k. (54-58130) p 634.1/7 ct (47.75)

SO; Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

BRYNZA, N.F.; STERLIN, B.P.; TKHORZHEVSKIY, S.A.; CHERNYAKOV, A.M.

Some characteristics of the relation of Upper Paleozoic and Mesozoic structural plans in the West Ukrainian oil- and gas-bearing basin. Geol. nefti i gaza 9 no.6:22-27 Je '65. (MIRA 18:8)

1. Trest Khar'kovneftegazrazvedka i Ukrainskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta prirodnogo gaza.

BRYNZEY, P.P. (Yassy, Rumyanskaya Narodnaya Respublika)

Role of cerebral parabiosis in physiopathology of epilepsy.
Vop.psikh.i nerv. 8:155-161 '62. (MIRA 17:4)

DZHAVROVA, I.K.; ANTONKIN, E.; BRYNZOVA, Z.; DEMICHEVA, N.; ZERENKOVA, L.; TARASOVA, V.; YANKEVICH, G.

Comparative evaluation of various media for determining the toxigenic properties of diphtheria bacilli in vitro. Lab. delo 6 no.4:48 Jl-Ag '60. (MIRA 13:12)

1. Kafedra mikrobiologii Smolenskogo meditsinskogo instituta.
(BACTERIOLOGY--CULTURES AND CULTURE MEDIA) (DIPHTHERIA)

WASIK, August; BRYS, Jozef

The effect of neuroleptics on the writing of schizophrenics. Neurol. neurochir. psychiat. Pol. 15 no.2:213-216 Mr-Ap '65.

1. Z Kliniki Psychiatrycznej AM we Wroclawiu (Kierownik: doc. dr. A. Bukowczyk).

BRYS, K., promovany biolog

Effect of antibiotics on the microorganisms of purification agents.
Vodni hosp 15 no.4:169 '65.

BRYS, S.

3

3463 621.791.753 : 621.791.318 : 621.791.053 : 669.2/.8

Bryś S. Electrodes, Wire and Fluxes for Welding and Brazing Non-Ferrous Metals.

„Elektrody, druty i topniki do spawania metali nieżelaznych". Przegląd Spawalnictwa. No. 5, 1954, pp. 174—178, 11 figs.

POL

The Welding Institute has, in recent years, developed a number of new types of electrodes, wire and fluxes for the welding and brazing of non-ferrous metals. Descriptions are given of: 1) the „Cynkogaz" flux suitable for welding both thin and thick zinc sheets, as well as for brazing, by means of spelter, galvanised steel sheets; 2) spelters for the hard and soft brazing of aluminium, and a flux for the hard brazing of aluminium; 3) aluminium electrodes containing in the core from 99.5 to 99.7 per cent aluminium and from 0.1 to 0.2 per cent titanium — for the arc welding of aluminium; 4) bronze electrodes suitable for welding or tipping tin bronzes.

P/036/61/000/012/002/002
D002/D101

AUTHOR: Bryś, Stanisław, Master of Engineering

TITLE: Mechanical properties of hydronalium joints made by the TIG welding method

PERIODICAL: Przegląd spawalnictwa, no. 12, 1961, 312-319

TEXT: The article is a reprint from Biuletyn informacyjny (Information bulletin) of Instytut Spawalnictwa (Institute of Welding), no. 13, 1961. Weld joints on Al-Mg2-Mn, Al-Mg5-Mn-Cr and Al-Mg3-Mn alloy plates were tested at the Institute of Welding for mechanical properties in view of the growing demand for aluminum alloy structures. The US designation for comparable alloys introduced in the thirties was 52S no. 216 and 220. The Zakład Budowy Prototypów (Prototype Section) of the Institute currently manufactures equipment for Tungsten-Inert-Gas type of welding; the method was formerly known under the designation "Argonarc". Weld electrodes used in the test were drawn from strips of the same material. Weld samples were subjected to tensile, bending and impact tests in an effort to establish the factors which have a bearing on weld properties. Conclusions: The condition of good weld quality is an iron content of not more than 0.20%, a

Card 1/2